AMENDMENT

Please amend the application, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows:

IN THE CLAIMS:

1. (Currently Amended) A DNA vaccine comprising (i) a naked DNA ~~incorporating~~ containing and expressing *in vivo* a polynucleotide encoding an antigenic polypeptide; and (ii) at least one adjuvant ~~compound chosen from the polymers~~ which is a polymer of acrylic or methacrylic acid ~~and the~~ or a copolymers of maleic anhydride and alkenyl ~~derivative~~.
2. (Currently Amended) The vaccine according to Claim 1~~, characterized in that it comprises, as~~ wherein the adjuvant ~~compound,~~ comprises a polymer of acrylic or methacrylic acid cross-linked with a polyalkenyl ether of a sugar or polyalcohol.
3. (Currently Amended) The vaccine according to Claim 2, ~~characterized in that~~ wherein the polymer is cross-linked with an allyl sucrose or with allylpentaerythritol.
4. (Currently Amended) The vaccine according to Claim 1, ~~characterized in that it comprises, as~~ wherein the adjuvant ~~compound,~~ comprises a copolymer of maleic anhydride and cross-linked ethylene.

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5. (Currently Amended) The vaccine according to Claim 1, ~~characterized in that~~ wherein the adjuvant ~~compound~~ is present in the vaccine in an amount of 0.01% to 2% w/v.
6. (Currently Amended) The vaccine according to Claim 5 ~~characterized in that~~ wherein the adjuvant ~~compound~~ is present in ~~has~~ a concentration of 0.06 to 1% w/v.
7. (Currently Amended) The vaccine according to Claim 1, ~~characterized in that~~ wherein the naked DNA is a plasmid.
8. (Currently Amended) The vaccine according to Claim 1, ~~characterized in that it comprises a naked DNA incorporating and expressing~~ wherein the antigenic polypeptide is an antigen of a pig, horse, dog, bovine, cat or avian pathogen.
9. (Currently Amended) The vaccine according to Claim 8~~, characterized in that it comprises at least one~~ wherein the pathogen ~~chosen from~~ comprises:
   - Aujeszky's disease virus,
   - porcine influenza virus,
   - porcine reproductive and respiratory syndrome virus,

- porcine parvovirosis virus,
- hog cholera virus,
- Actinobacillus pleuropneumoniae,
- equine rhinopneumonia virus,
- equine influenza virus,
- Cl. Tetani,
- Eastern encephalitis virus,
- Western encephalitis virus,
- Venezuelan encephalitis virus,
- B. burgdorferi,
- Canine Distemper virus,
- canine parvovirus,
- canine cornoavirus,
- canine herpesvirus,
- rabies virus,
- bovine herpesvirus types 1 or 5,
- bovine respiratory syncytial virus,
- bovine pestivirus,
- bovine parainfluenza virus type 3,
- feline leukaemia virus,
- feline panleukopaenia virus,
- feline infectious paritonitis virus,
- feline herpesvirus,
- feline calicivirosis virus,
- feline immunodeficiency virus,
- Marek's disease virus,
- Newcastle disease virus,
- Gumboro disease virus,
- avian infectious bronchitis virus,
- avian infectious anaemia virus,

- infectious laryngotracheitis virus,
- avian leukosis virus,
- avian pneumovirus, or
- avian influenza.

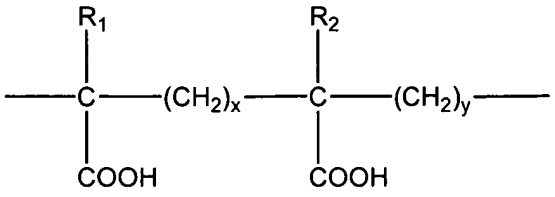
10. (Currently Amended) A method of enhancing efficacy of a DNA vaccine which ~~incorporates~~ comprises a naked DNA containing and ~~expresses~~ expressing *in vivo* a heterologous polynucleotide by adding to the DNA vaccine an adjuvant ~~chosen from the polymers~~ which is a polymer of acrylic or methacrylic acid ~~and the~~ or a copolymers of maleic anhydride and alkenyl ~~derivative, as defined in Claim 1~~.

11. (Currently Amended) The DNA vaccine of claim 1, wherein the polynucleotide ~~is a gene of a~~ encodes an immunogen of a pathogenic agent.

12. (Original) The vaccine of claim 4, wherein the ethylene is cross-linked with divinyl ether.

13. (Original) The vaccine of claim 6, wherein the adjuvant compound has a concentration of 0.06 to 1% w/v.

14. (Currently Amended) The vaccine of claim 1, wherein the adjuvant ~~compound~~ is a carbomer or ~~an EMA®~~. copolymer of the following formula:



wherein R_1 and R_2, are identical or different, and are H or CH_3,
x is 0 or 1, and y is 1 or 2, and x + y = 2.

15. (New) The vaccine according to Claim 8, wherein the pathogen comprises equine rhinopneumonia virus or equine influenza virus.

16. (New) The vaccine of claim 15 wherein the pathogen comprises equine rhinopneumonia virus.

17. (New) The vaccine of claim 15 wherein the pathogen comprises equine influenza virus.

18. (New) The vaccine of claim 8 wherein the pathogen comprises equine rhinopneumonia virus, equine influenza virus, Cl. Tetani, Eastern encephalitis virus, Western encephalitis virus, Venezuelan encephalitis virus, B. burgdoferi, or rabies virus.